IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An antenna branch selector for selecting for processing at least one of a plurality of antenna branches each coupled to a respective receive antenna and carrying a received signal, said antenna branch selector comprising:

a signal selector having a plurality of inputs to receive signals from said plurality of antenna branches and having an output to output a selected signal for processing;

a time-to-frequency domain converter configured to receive a time domain signal from each of said plurality of antenna branches and to provide a corresponding frequency domain output signal; and

a controller coupled to said time-to-frequency domain converter and to said signal selector to control said signal selector to select a said an antenna branch from said plurality of antenna branches responsive to a measure of multipath fading for the received signals determined from said corresponding frequency domain output signal.

Claim 2 (Currently Amended): An antenna branch selector as claimed in claim 1, wherein said controller is configured to select [[a]] said antenna branch from said plurality of antenna branches responsive to a difference between a signal level at a first frequency and a signal level at a second frequency in a [[said]] frequency domain output signal for an antenna branch.

Claim 3 (Currently Amended): An antenna branch selector as claimed in claim 2, wherein said first and second frequencies comprise frequencies of said received signal corresponding to said selected antenna branch.

Claim 4 (Currently Amended): An antenna branch selector as claimed in claim 3,
wherein [[a]]

said received signal corresponding to said selected antenna branch has, in the

frequency domain, at least two tones, and wherein

said first and second frequencies comprise frequencies of said at least two tones.

Claim 5 (Currently Amended): An antenna branch selector as claimed in claim 4,
wherein

said received signal corresponding to said selected antenna branch comprises a packet

data signal including a preamble signal portion, and wherein

said at least two tones comprise tones of said preamble signal portion.

Claim 6 (Currently Amended): An antenna branch selector as claimed in claim 5,
wherein said received signal corresponding to said selected antenna branch comprises a

Bluetooth compatible signal.

Claim 7 (Currently Amended): An antenna branch selector as claimed in claim 2,
wherein said controller is configured to select [[a]] said antenna branch from said plurality of

antenna branches responsive to a comparison of said difference in signal level levels between

said first and second frequencies for one said antenna branch from said plurality of antenna

branches with said difference in signal level levels between said first and second frequencies

for another said antenna branch from said plurality of antenna branches.

Claim 8 (Currently Amended): An antenna branch selector as claimed in claim 3,
wherein

said controller is further configured to determine an indication of received power for a said antenna branch, and ~~wherein~~

said controller is further configured to select [[a]] said antenna branch <u>from said plurality of antenna branches</u> responsive to said received power indication.

Claim 9 (Currently Amended): An antenna branch selector as claimed in claim 3, wherein said controller is further configured to select [[a]] said antenna branch responsive to a difference between signal levels in said frequency domain signal for an antenna branch at a third frequency comprising a frequency of said received signal and at a fourth frequency comprising a frequency at which substantially no signal level from said received signal is expected.

Claim 10 (Currently Amended): An antenna branch selector as claimed in claim 8, wherein said controller is responsive to a sum of signal levels at a plurality of said third frequencies.

Claim 11 (Currently Amended): An antenna branch selector as claimed in claim 1, wherein

said received signal comprises a packet data signal including a payload signal portion, and ~~wherein~~

said controller is further configured to control said signal selector during said payload signal portion.

Claim 12 (Currently Amended): An antenna branch selector as claimed in claim 11, wherein said controlling of said signal selector during said payload signal portion is

conditional upon a Doppler frequency shift of said received signal being greater than a threshold value.

Claim 13 (Original): A receiver including the antenna branch selector of claim 1.

Claim 14 (Currently Amended): ~~Processor control code to, when running implement the antenna branch selector of claim 1~~ A computer readable medium including computer executable instructions, which when executed by a processor, cause the processor to perform a method comprising:

transforming a received signal from each antenna in said plurality of antennas from the time domain to the frequency domain;

determining a measure of multipath fading for the received signal from each antenna from said frequency domain transformed signal; and

selecting a received signal responsive to said determined measure of multipath fading.

Claim 15 (Currently Amended): A method of selecting a received signal from an antenna of an antenna system ~~comprising~~ including a plurality of antennas, the method comprising:

transforming a received signal from each ~~said~~ antenna in said plurality of antennas from the time domain to the frequency domain;

determining a measure of multipath fading for the received signal from each [[said]] antenna from said frequency domain transformed signal; and

selecting a received signal responsive to [[a]] said determined measure of multipath fading.

Claim 16 (Currently Amended): A method as claimed in claim 15, wherein said determining comprises comparing signal levels of said selected received signal at two or more frequencies.

Claim 17 (Currently Amended): A method as claimed in claim 16, wherein

said selected received signal comprises a packet data signal including a preamble portion, and wherein

said determining is performed during a detection of said preamble signal.

Claim 18 (Currently Amended): A method as claimed in claim 17, wherein said two or more frequencies comprise tones of said preamble signal.

Claim 19 (Currently Amended): A method as claimed in claim 15 further comprising:

determining a measure of received signal strength[[,]] for [[the]] each received signal from each said antenna from said plurality of antennas using said frequency domain transformed signal, [[and]]

wherein said selecting is further responsive to [[a]] said determined measure of received signal strength.

Claim 20 (Currently Amended): A method as claimed in claim 15 further comprising:

determining a measure of received signal to noise and/or interference ratio[[,]] for [[the]] each received signal from each said antenna from said plurality of antennas using said frequency domain transformed signal, [[and]]

wherein said selecting is further responsive to said determined measure of received signal to noise and/or interference ration ratio.

Claim 21 (Currently Amended): A method as claimed in claim 17, wherein said packet data signal includes a payload portion, and said method further comprising:

monitoring a received signal indicator during reception of said payload portion; and

selecting a received signal responsive to said monitoring.

Claim 22 (Currently Amended): A method as claimed in claim 21 further comprising:

monitoring a received signal frequency change parameter, [[and]]

wherein said selecting of [[a]] the received signal responsive to said monitoring is responsive to said frequency change parameter.

Claim 23 (Currently Amended): A system for selecting a received signal from an antenna of an antenna system comprising a plurality of antennas, said received signal comprising including a packet data signal including preamble and payload signal portions, the system comprising:

means for selecting said received signal responsive to a received signal parameter measured during said preamble signal;

means for determining a Doppler frequency change of said received signal; and

means for reselecting said received signal during said payload signal conditional upon said determined Doppler frequency change being greater than a threshold frequency change.

Claim 24 (Currently Amended): A method of selecting a received signal from an antenna of an antenna system comprising a plurality of antennas[[;]], said received signal comprising a packet data signal including preamble and payload signal portions, the method comprising:

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selecting said received signal responsive to a received signal parameter measured during said preamble signal;

determining a Doppler frequency change of said received signal; and

~~means for~~ reselecting said received signal during said payload signal conditional upon said determined Doppler frequency change being greater than a threshold frequency change.

Claim 25 (Original): A method as claimed in claim 24 wherein said threshold frequency change is dependent upon the duration of a said packet.